The Logger's Bark

RADIO CLUB of TACOMA

FEBRUARY, 2020 VOLUME 17, ISSUE 2 ©Radio Club of Tacoma W7DK

THE PRESIDENT'S CORNER

DAVE W7UUU

Elections are over and a Time for Thanks; Awards Banquet Reminder

It's hard to imagine that a year ago today (as I write this, on Sunday February 16, 2020) was the first day in five days that Anne and I were able to get down Swofford Lane and get back to civilization! We still had 21 inches of snow on the ground, but at last our neighbors had all gotten together to hire a private plow to come clear the somewhat steep 1/3 mile road down to the highway! But today the sun is out, the grass is green, and spring is very soon to be in the air, with daffodils poking out of the ground and the birds switching over to their spring sounds.

I'd like to take my hat off to our new Presentations Coordinator, Verna Lilly KF7SCB, for really taking her new role seriously and producing some very well thought out presentations for our General Meetings. Her most recent presentation entitled "Working with the Sun – Propagation and Sun Cycles" was really well done and covered a lot of ground that while possibly over a lot of heads, was still pretty easy to grasp and learn from. Well done, Verna! I truly look forward to your programs going forward.

Another topic that is fresh on the minds of the members of the Board of Directors: what can we do to grow our membership? A very solid and important part of preserving our organization for the future lies in keeping our membership active, vibrant, and growing. Every year we seem to more or less hit about 300 members in good standing. And there's no question that's a good number, and a good sign in the sense our membership is not dwindling as in many radio clubs around the country and the world, for that matter. But we need to do more. The Board is actively looking at any ideas of ways and means to attract new members, whether they be youngsters, family age, or seasoned citizens. At one time, in the mid-1980s our membership topped 500 and we'd all love to see that number again!

If you have any ideas of things we could be doing better to attract new members, by all means let any officer know. Especially if it's some-

Page 1: From the President.

Page 2: From the editor.

Page 3: BOD meeting minutes.

Page 7: RCT property Management list of items for sale.

Page 9: ARES Matters.

Page 11: Revers Polarity from PJ.

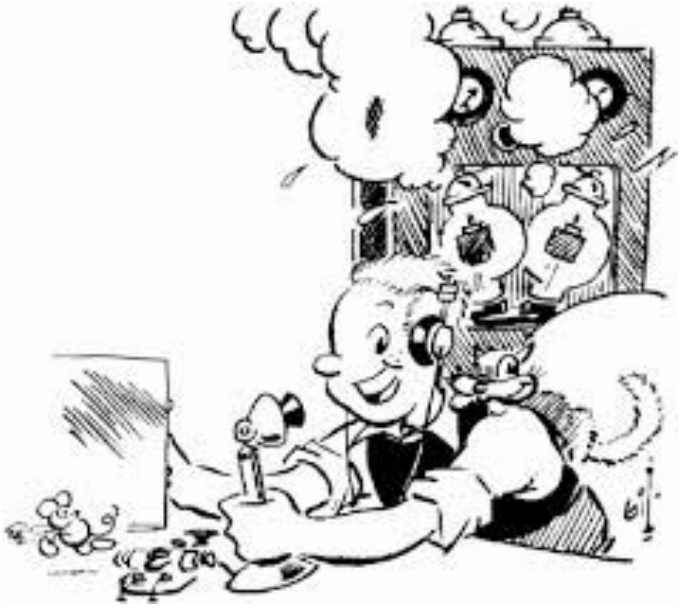
Page 15: Mineral Winter Fest.

thing that you can personally do to assist in this process. Do you have access to other groups perhaps at your work or other non-amateur-related clubs who might be interested in learning aspects of Amateur Radio? Emergency communications has long been a keen interest for many in the hobby and service that is Amateur Radio – do you know of a group looking to learn more? Let me or any other officer know if you have any such folks in your world that could be a potential for the Radio Club of Tacoma to attract new interest and new members.

Lastly, for those who may not be aware, the Radio Club of Tacoma has been working with the City of Tacoma real estate department regarding the issue we are having with the city garbage trucks picking up the cans in what we consider to be the alley to the South of the clubhouse. However, it's not an alley but rather a city street! The long road from there that runs to the South along the apartments is in fact the alley. All of this factors in to how the City of Tacoma views the garbage pickup procedures. The Board of Directors and I have been in meetings and discussions with Troy Stevens, Senior Real Estate Specialist for the City of Tacoma about what the City might offer as a solution to the problem regarding truck access to the South side of the clubhouse.

We had hoped to have the report in hand in time for the February Board Meeting but alas, Troy had not been able to get it to us for review by the Board and officers in time for the meeting. We hope to have the report in time for the March board meeting and will keep you all apprised of the situation once we have their recommendations in hand for the Board to review

Dave
W7UUU



From the Editor

Errata: In last month's issue your editor identified the wrong Ann / Anna :

LEFT: ANN, N7ANN WORKING THE SALMON RUN LAST SEPTEMBER AT "THE MIGHTY 'DK!"

That should have been Anna K7ANA the ever patient wife & partner of Nick K7MO. Sorry folks! Will do better in future.

Been a very busy week around radio WG7X this month. As the new editor of the "Loggers Bark" I am slowly trying to get back into the swing of things with the MS Publisher program and its many facets. If that was not enough, I still manage to get some folks confused like Ann N7ANN and Anna K7ANA. I repeated that error again during the CQ 160 contest last Friday night. Anna was going full speed ahead calling for contacts. I called her and then asked her to say hello to Dave, our esteemed President.

Oops! Wrong again! One of these days I will get this straight. Everyone can have a good laugh at my expense now…

Looking into the near future, the annual Mike & Key swapmeet is coming up on March 7th. RCT will have a table there with many really nice items up for sale. Also on that note, further into this month's publication there is a list of all equipment currently up for sale by the Property Management committee. Look it over and make a choice before it's too late!

The "Bark" should be on the website soon enough to let you make a decision if you are so minded. List begins on page 8.

Lastly, as I mentioned, there have been a few hiccups with me learning the Publisher program. Due to some errors, probably on my part, the February general meeting minutes will probably have to appear in the next issue.

Folks, if you wish to provide material for publication, send it to me in MS Word .docx file format, MP Publisher files or as plain text for the present. As I learn more about the publishing software, that might change. Pictures always welcome, but need to know who., what, where. All that Jazz!

That's all from this corner for now. 73 and hope to see you at the clubhouse!

Radio Club of Tacoma

Board of Directors Meeting Agenda

February 5, 2020

Meeting called to order at 19:02 PST, by Dave Ellison - W7UUU

Officers and Directors Present

President Dave Ellison W7UUU

Vice President Mike Mikuchonis W7XTZ

Secretary Mike Drorbaugh W7MKE

Treasurer Steve Dightman AF7YD

Board Bruce Hanson WE7P

Board Red Cranefield WB7EC

Board Phil Pia K7PIA

Quorum

A BOD quorum was present and 12 people signed the attendance roster attached to this report.

Silent Key or Illness

Dave Andresen -W7HTJ went to hospital for surgery FEBRUARY 29th and is now in Seattle for physical therapy

Pete David – KK7QW, member since 1996 and former Doc Spike recipient was reported as not showing up (on nets?) for unknown reasons

Dick Hazelmyer – K7CYZ RCT Lifetime member has become a Silent Key. It was reported that a memorial will be held in Spokane 2/15/2020.

Approval of Minutes

Minutes of RCT BOD meeting were approved as circulated.

Secretary's Report (W7MKE) Usual stuff: Periodicals, utility bills, bank statements and QSL cards received. Secretary and Treasurer met with Fournier Insurance brokers to review our property insurance coverage and added the new shed to the policy. Shed was valued at $5,000 and contents $3,000. There is no theft insurance for shed. No increase in insurance premium was needed. Secretary was directed to inquire about theft insurance for shed contents.

Treasurer's Report (AF7YD) Current balance? Please contact the club treasurer for that info.

Steve-AF7YD offered an overview of income and spending over last 3-years based on his

QuickBooks data and posed questions about long term strategies. Steve called for the formation of a BOD committee to address these long term issues. Adam –W2NCC, Red –WB7EC, Dave –W7UUU and Mike- W7XTZ agreed to help.

A motion was made, seconded and approved that minutes published in the *BARK* not include Treasury reported financial data. The *BARK* editor is authorized to remove Treasury information from BOD Minutes when published but can leave miscellaneous income from raffles and such.

Committee / Reports

- **Membership (K7GRS)** Membership stands at 242. There are still former members who haven't renewed.
- **Training (AD7AB)** A Technician training class was held FEBRUARY 11-12 with 12 people attending. Amateur Extra Class is being conducted by Dave Brooks N7HT, and is held each Thursday evening with 14 students attending. CERT training begins soon. Look for details at Tacoma CERT.
- **Info Tech and Website (WB4SPB)** All system functioning normally. Some needed website corrections have been reported per Randy's request to do so and he will work on making corrections.
Randy reports there is an IT refresh committee consisting of KI7HAE, N7CPM, AD7AB, W2NCC and WB4SPB. Committee is developing recommendations for new computer equipment both short term and medium term.
- **HF Operations (K7PIA)** Chris -N7CPM has resigned from HF Committee and Phil K7PIA is now the Chairperson. All HF stations are functioning at 100W. There are upcoming contests including for RTTY, CW and the ARRL International DX if anyone is interested.
- **Repeater Ops (N7OMS)** Jim Hatfield – K7SSS has joined the repeater committee. Committee plans are to do site visits, equipment inventory and some baseline testing. All officers and Board members are requested to attend the Tuesday Night Nets.
There was a question if Crawford Mountain contract is current. Treasurer reports RCT paid but due to issues at Forest Service there may be no correlation between "contract agreement" and payment.
Adam – W2NCC was thought to have the latest contact information and was requested to check into status of our contract.
- **Facilities Mgmt. (By N7OMS)** Al-N7OMS mentioned plans to move the VHF/UHF upstairs and he requested more club members to participate In VHF/UHF activities as new Hams often get license mostly for VHF/UHF use.
To facilitate movement of the coax from the VHF/UHF antennas to the new location upstairs and to add proper engineering including grounding, bonding and, lighting arresting, facilities team requests $700 dollars for materials to make those upgrades. Board requested that an itemized list of materials be submitted first.

• **Property Mgmt. (WB7EC) A motion was made, seconded and approved** to allow sell of the items on the February PMT inventory list submitted and attached to this report.

FEBRUARY raffle made $60, FEBRUARY PMT sales $300.

PMT reported a desire to have all items bound for Mike & Key to be properly checked out and labeled to increase sales.

• **Museum (KR7W)** Randy-WB4SPB reported new workbench for the museum was under construction by Rich - KR7W.

• **Weds Workshop (WB4SPB)** Next 4th Wednesday February 26, RCT member Joe Rempe – KJ7JAY an engineer with Tacoma Power will talk about AC Power Distribution

March 26, 2020 activity is expected to be a hands on workshop about putting crimp connectors on coax

April meeting will be the first field day meeting.

• **General Meeting (KF7SCB)** FEBRUARY's meeting: **"**Ham Radio Pride or How to Explain Ham Radio to Your Friends" by Verna Lilly- KF7SCB. The program talked about the features and benefits and the culture of Ham Radio. It included many pictures from RCT events, members and lots of good humor and audience Participation.

February 8th General Meeting program will be "Working With the Sun - propagation and Sun cycles".

Unfinished Business

Troy Stevens, City of Tacoma Public Works did not attend our meeting as previously planned as the City of Tacoma is apparently not yet done surveying, checking out gravel needs and reviewing a possible agreement.

Dave - W7UUU offered a report on a dual channel wireless microphone system for the club. System costs would about $250 and Board consensus was that the proposed gear was adequate for our needs and for Dave to purchase the system and submit expenses for reimbursement.

New Business

No new business reported.

Activity Reports and Discussion Topics

QSL cards for recent W7OS events are coming in with SASE. Randy WB4SPB plans to order QSL cards.

Nick – K7MO reported plans for the "Tower Czar" to begin a ring grounding project for the club house. He indicated he has most of the materials needed but would like helpers for the project.

Announcements

No other announcements.

Adjournment at: 20:15 PST

Respectfully Submitted

Mike Drorbaugh– W7MKE

RCT Secretary

FEBRUARY 2020

Property Management team request to surplus following items from Board of

Directors of the Radio Club of Tacoma

1. RCT 4013 Astron Power Supply RS-35M
2. RCT 4016 Parts of GE 2 MTR Repeater
3. RCT 4017 GE Master II SN: 243692
4. RCT 4018 Ringo AR6 six meter antenna
5. RCT 4020 ICOM HF XCVR IC-756 PRO III SN: 3204703
6. RCT 4021 Kenwood VHF All mode 6 mtr XCVR TS-605 SN: 60200008
7. RCT 4022 Mirage VHF 6 MTR AMP a-1015G SN: 30836
8. RCT 4023 Vectronics Antenna Tuner mod HFT 1500
9. RCT 4024 ACOM HF Linear AMP ACOM-1010 SN: 50160
10. RCT 4025 ASTRON Power Supply RS-35M
11. RCT 4026 Alinco VHF/UHF XCVR dr-605T
12. RCT 1046 Phelps Dodge 220 Duplexer 638-6-2 SN: 80444
13. RCT 3008 ICOM 440 XCVR IC-47A SN: 02778
14. RCT 3512 Sound Craft Systems Mobile PA L56B
15. RCT 3578 Bencher keyer/paddle
16. RCT 3520 CDE Rotor Control H-IV/CD-45-II SN: 85165
17. RCT 3521 CDE H-IV/CD-45-II PN: 801891
18. RCT 4027 CDE H-IV/CD-45 8pin CJ socket
19. RCT 4028 Hygain HAM-IV

Newly updated list to follow on next page. (ed.)

W7DK 2020 M & K SALE

FEBRUARY 2020

NEW ITEMS IN RED

		PRICE	
4. Heath Clock GS-1000		$50.00	
18. Yaesu HF PWR AMP FT-2100B		$300.00	
25. Kenwood XTAL Filter YG-455C-1		$50.00	
41. Suitcase with Tektronix scope camera		$50.00	
84. Comet Triplexer CFX-514		$40.00	
94. TEN TEK HF XCVR UNI 6+		$400.00	
94A. TEN TEK Power Supply OMNI PS P/O # 94			
110. Kenwood HF XCVR TS-850S SN: 70100203		$ 300.00	
114. Astron Power Supply RS-12A		$ 25.00	
119. Elecraft HF XCVR K1 TWO bands	15/40 /AT	$ 300.00	
125. Kenwood TR-9000 2MTR XCVR		$ 100.00	
127. Mirage 2 MTR AMP B-1016G		$ 200.00	
129. Kenwood Microphone MC-50		$ 75.00	
131. ICOM HF XCVR IC- 706	SN: 8973		UNDER REPAIR
136. Yaesu Rotor Controller G-800SDX	SN: NA	$ 55.00	
137. Wilson TWR Section TT-114 11'	SN: NA	$ 25.00	
138. Kenwood HF RX R-599D	SN: 530265		UNDER REPAIR
142. Vibroplex Keyer/bug	SN: 245832	$ 75.00	
147. DX Engineering Remote Coax Control Switch CC-8		$ 400.00	
148. DX Engineering Coax Switch RR8-HP		P/O #147	
149. Kenwood HF XCVR TS-930S SN: 2120327		$ 600.00	
150. Kenwood Speaker SP 930		P/O #149	
151. Kenwood MIC MC-60		P/O #149	
152. Kenwood Power Supply PS-30		P/O #149	
156. MFJ Active Antenna MFJ-1020C		$60.00	
157. MFJ Dual Speech Enhancer MFJ-618		$150.00	

158. Heathkit Receiver SW-717	$50.00
160. Yaesu Antenna Tuner FC-301	$100.00
161. RME Receiver RME-69 SN: 6439	$ 75.00
162. Atwater Kent (old receiver) Model 33	$75.00
163. Astron Power Supply RS-35M	$ 85.00
164. ICOM IC-756 PRO III HF XCVR	$ 700.00
165. Kenwood VHF AL MODE 6 MTR XCVR TS-60S	$ 100.00
166. Mirage VHF 6 MTR AMP a-1015G	$ 250.00
167. Vectronics Antenna Tuner mod HFT 1500	$ 300.00
169. Astron Power Supply RS-35M	$ 85.00
170. Alinco VHF/UHF XCVR DR-60ST	$ 150.00
171. ICOM IC-47A 440 XCVR	$ 30.00
172. Sound Craft Systems Mobile PA L56B	$ 100.00
173. Bencher Keyer/Paddle	$ 100.00
174. CDE Rotor Control H-IV/CD-45-II	$ 50.00
175. CDE H-IV/CD-45-II Rotor Control	$ 50.00
176. CDE H-IV/CD-45/8 pin socket Rotor Control	$ 50.00
177. Hygain HAM-IV Rotor Control	$ 50.00
178. 5 position coaxial switch	$. 30.00
179. B & W 5 postition coaxial switch	$ 30.00
180. Rig Blaster plug & play Digital mode interface	$. 30.00
181. Emerson speaker	$. 5.00
182. Archer rotor control PN: 15-1220	$. 5.00
183. Wilson WR50U rotor control	$ 7.00
184. ICOM IC-H19s2 VHF hand held/ BM-70 charger	$ 10.00
185. two Amateur TV stations in portable boxes	$ 500.00 for both/300.00 each

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AS OF 8 FEBUARY 2020

ARES MATTERS

Amateur Radio Emergency Service (ARES)
Western Washington Section
District 5, Pierce County ARES
www.PierceCountyARES.net

March 2020

Greetings, fellow Hams!

ARES MATTERS provides information about amateur radio emergency communications, Pierce County ARES activities, and events; courtesy of the Radio Club of Tacoma, ***Loggers Bark***. ARES is an ARRL organization dedicated to Amateur Radio Emergency Communication through proficiency and preparedness.

When You Need Amateur Radio, You Really Need It!

The expanding role of Amateur Radio to support Emergency Management activities

Pierce County ARES has been working with Pierce County Emergency Management (PCEM) to define roles, establish expectations, train/certify operators, and solidify our relationship in support of Pierce County for many years. This relationship continues to improve, and as a result, Amateur Radio's use in EMCOMM/AUXCOMM is expanding.

Over the last couple of weeks, Pierce County ARES has been activated multiple times for short durations to support incident response operations. These activations are a result of coordination with PCEM, and the Pierce County Search and Rescue Council. The topography of Pierce County and the nature of some response operations preclude the use of cell phones and limited Part 90 (commercial/public safety) infrastructure in the most rural parts of the county. Amateur Radio is filling the gap and providing communications support to responders for our community. This trend highlights a couple of key points for amateur radio operators within Pierce County:

There are opportunities to assist in real-world incident communications
Amateur radio infrastructure has and will be used to support operations

Pierce County ARES is always looking for more operators; if you are interested in applying your skills to support real-world operations, we need your abilities. To support PCEM operations, operators must complete the minimum Incident Command System (ICS) training (online) and receive a Washington State Emergency Workers card. The WA. State Emergency Workers card provides limited liability insurance for the operator and their equipment during an activation. If you are interested in serving your community during real-world operations, we highly encourage you to submit your application on our website. We provide training to prepare our operators to support PCEM and deployed response efforts.

As amateur radio infrastructure is increasingly used to support operations, you may notice that local repeaters are being placed into emergency status to support mission requirements. Infrastructure in use to support operations will be identified with a preamble read at intervals to announce that the repeater is in use. Due to the nature of diffused operations across the county, multiple repeaters may be used. Our primary repeater is the W7AAO 145.3700 W MHz repeater located on Grass Mountain. However, other repeaters have and will be pressed into service. We publish a consolidated list of our communications resources in our ICS-217A-D5 form on our website. Incident leadership will select repeaters/frequencies from this list to support operations.

As we move into spring and summer, these response operations may increase as more people trek into our wildlands to enjoy what Pierce County has to offer. If you are interested, now is the time to start. We are trying to expand our pool of operators to support EOC operations, local operations, and deployed operations to support responders. We have five regionally aligned Teams to support operations in Pierce County: Peninsula Team, Central Team (Tacoma metropolitan area), East Team (410 corridor, Orting valley, and the Puyallup/Carbon river basins), South Team, and the Roy Area Communications Network (home-based). Teams conduct internal meetings and provide additional training in their areas. If you are interested, we can find a place for you to serve.

Twitter:

Pierce County ARES is regenerating our *Twitter* presence to provide real-time information updates via social media. In addition to our website, Facebook group(s), and PCWARN notification protocols, we will now be incorporating *Twitter* into our alert and notification procedures. Our public *Twitter* account can be found at: @ARESWWADist5.

ARES Background

Pierce County ARES manages local ARES activity, training, exercises, and proficiency development. Pierce County ARES supports and meets at the Pierce County Emergency Operations Center every third Thursday, at 7 PM.

Future meetings, current events, and items of Ham radio interest

Lots of great amateur radio proficiency enhancement opportunities, team building, and social activities are scheduled for District 5 ARES members during the next few months:

Thursday, February 20th, PCEOC monthly meeting, Alternate Power Sources
Saturday, February 29th, WA State E2E Drill (District 5, Functional)
Thursday, March 19th, PCEOC monthly meeting, Forms Seminar and Drill
Saturday, March 28th, 7 am – 1 pm, Leadership TTX
Thursday, April 16th, PCEOC monthly meeting, Connectors, Coax, basic troubleshooting
Saturday, April 18th, 9 am – 12 noon, PCEOC, WINLINK & APRS Overview, Drill (hands-on)
Saturday-Sunday, April 25th -26th, All day both days, South Seattle College, Communications Academy

Pierce County District 5 Website: http://www.piercecountyares.net/web
ARES Membership Application: http://www.piercecountyares.net/web/application
Twitter: @ARESWWADist5

Gary Emmons
District 5 PIO
KH2AY
newsletter@piercecountyares.net

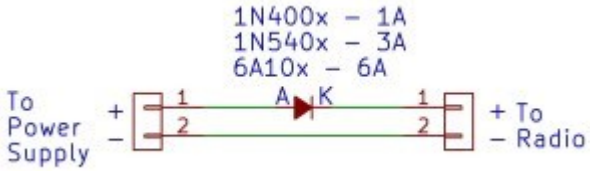
Committed to our Community
When All Else Fails

Reverse Polarity Protection

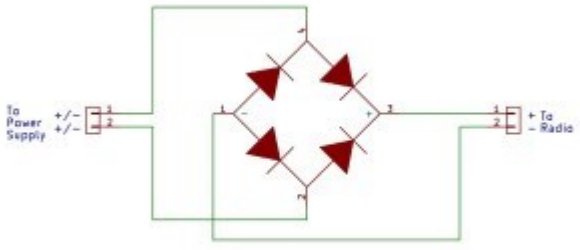
or how I learned to stop worrying and love the magic smoke

We have all done it, or will one day, hook the power cables to the radio backwards. Hopefully little to nothing will happen. Sometimes it's a minor repair like replacing a fuse or regulator. But other times you watch the equipment lose all its magic smoke. Here are a few simple tips and tricks you can use to help keep that magic smoke from leaving your rig.

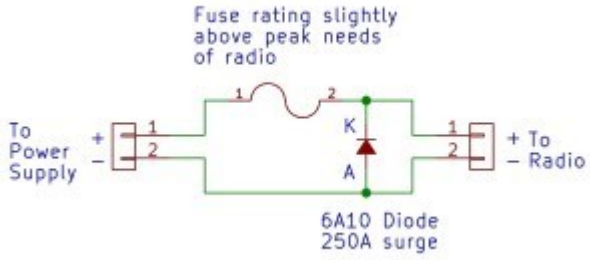
Series Diode – By far the cheapest and easiest to install is a diode in series with the positive power lead; Anode(A) toward the power supply and Cathode (K or banded end) going to the radio. A 1N400x series diode will handle many QRP rigs up to about 1A and a 1N540x series will work up to around 3A. Although simple and cheap this method comes at a cost. The diode will drop about 0.6-0.9V which could result in lower transmit power and if the equipment uses voltage regulators this lower voltage may be under the regulator level. Best check if these conditions exist before making modifications to your project.



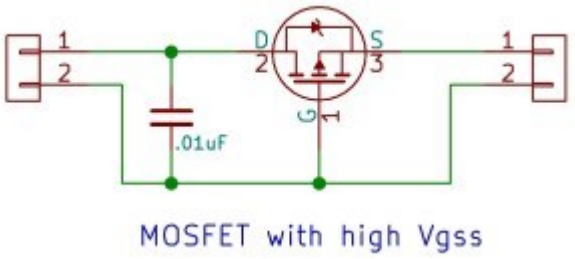
Bridge Rectifier – The most foolproof method for reverse polarity protection. For a dollar or two, the bridge will correct the polarity no matter how you connect the power supply. With a bridge there are always 2 diodes conducting which can result in greater losses of round .8-1.5V. This works well only when a single power supply is used with a single radio but should be avoided when multiple pieces of equipment are connected together.



Fuse with crowbar diode – With most protection circuits there is usually some form of loss in the circuit as seen in the diode examples above. However, the fuse with a crowbar diode has no voltage drop loss. The crowbar works by putting a diode across the voltage lines with the Cathode toward the positive side. This in effect leaves the path through the diode open unless the polarity is reversed. When that happens the diode now becomes an almost short circuit causing the fuse to blow. The cost, of course, is that a hefty diode needs to be used to handle the large current flow until the fuse opens up, not to mention a new fuse each time it's tested.



MOSFET – Not only can MOFSETs do a great job at switching, a P-channel MOSFET does an excellent job of reverse polarity protection. Depending on your needs, the cost is from a few pennies to a dollar or two. Under normal circumstances the MOSFET is turned on with a small voltage drop across it, typically fractions less than the diode examples above. When the polarity is reversed the MOSFET is forced off and creates an open circuit.



MOSFET RPP Considerations:

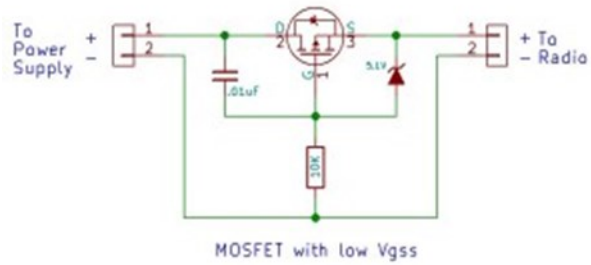
1. VDS – Voltage Drain to Source – must be greater than the power supply voltage.
2. RDS(on) – Resistance of the Drain to Source when the MOSFET is turned on. This must be as low as possible. Usually the lower the Rds (on) the more expensive.

Vgss – Voltage from Gate to Source – The maximum voltage allowed from Gate to Source. This should also be greater than the power supply voltage. Many MOSFET's will have a lower Vgss. In these cases the addition of a simple zener diode and resistor are required as follows:

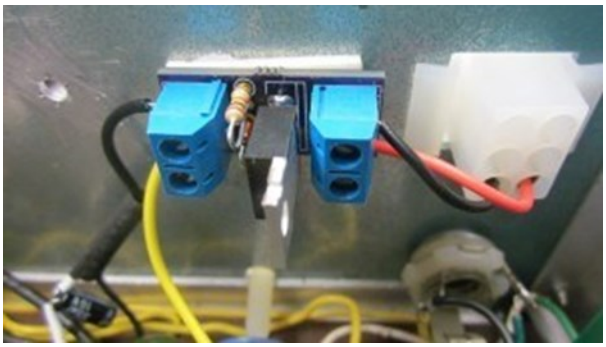
Resistor is not critical, almost any value between 10K and 100K is good.

Zener voltage must be less than the MOSFET Vgss. Additionally it must be greater than the MOSFET Vgs (th) – Threshold Voltage from Gate to Source – This is the minimum voltage required to fully turn on the MOSFET.

There is a small capacitor in the Drain to Gate circuitry. This capacitor is optional but recommended and only used for static discharge protection.



Reverse Protection circuit kit sold by 3rd Planet Solar/ KC9on, kit $6.00 and assembled $9.00 kc9on.com



POLARIZED CONNECTORS – Power Poles – A fairly foolproof and inexpensive method of protection is the use of polarized connectors such as Power Poles. They are color coded and will only connect one way. Care must be taken that the far cable end is also connected with the correct polarization.

The article above was written by John Clements of Planet Solar/KC9ON and is used and paraphrased with his permission. I have edited and added as I felt appropriate. P.J. Hicks

…And now, a blast from the past! Brought to you courtesy of Rich KR7W

W7WG makes contact with his Whiskey Group Comrades on the HF bands- at the summit (the rock the radio is on) of 7002 ft Dege Peak- whilst other members of the WW7LW group operate in the 2006 September ARRL VHF Contest.

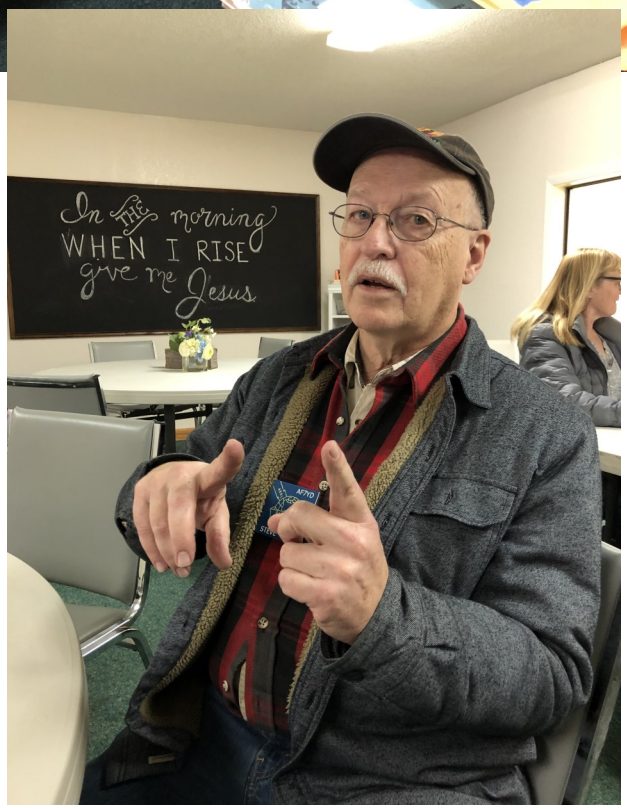
The same DX-pedition at the parking lot. Sunrise side of Mt. Rainier.

From left to right: Rich KR7W, Chuck AC7QN, Gary WG7X (and someone who I should remember but can't right now) and the ever popular Worth W7WG

Pix from the Mineral Winterfest swap meet, courtesy of Al N7OMS. Thanks AL!

No explanation of who's who in these pictures. All I can say is that there are some familiar faces

Love
John 15:13


In the morning
WHEN I RISE
give me Jesus

FOR SALE
Hickok 539C Tube Tester
$ 650
The tester works with the following caveats:
This tester has a replacement meter which is not a Hickok. It is slightly sticky in places. The original Hickok meter is included. It needs repair.
There are no other known problems other than some cosmetic issues.
The tester has not been calibrated.
An original 1961 manual and a copy of a 1968 manual and some information from various on-line sources is included.
Some E-Bay listings show working calibrated testers
SELECTORS
POWER ADJUST
FUNCTION SWITCH
Hickok
Model 539C Tube Tester
MADE IN U.S.A.

ZENITH
trans-oceanic
the hallicrafters co.
MODEL S-85
TUNING
BANDSPREAD
VOLUME
NOISE LIMITER
PITCH CONTROL
STANDBY
PHONES

The Club LINEUP

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Vice Pres: Mike Mikuchonis, W7XTZ - w7xtz©w7dk.org

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Treasurer: Steve Dightman, AF7YD - af7yd©w7dk.org

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Adam Barbera, W2NCC - w2ncc©w7dk.org

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Phil Pia, K7PIA - k7pia©w7dk.org

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www.w7dk.org [LINK] - For the latest and most current information on events and activities, visit the Radio Club of Tacoma Website.

Radio Club Repeaters

Central Tacoma: 147.280 + PL=103.5

Crawford Mountain 147.380 + PL=103.5 (E of Olympia © 1500 ft ASL)

Central Tacoma: 440.625 + PL=103.5

North Tacoma: 145.21 – PL=141.3